

BARNES & THORNBURG LLP

Suite 4400
One North Wacker Drive
Chicago, IL 60606
(312) 357-1313 (Telephone)
(312) 759-5646 (Facsimile)

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Customer No.:	23644	}
Application No.:	10/699,428	}
Confirmation No.:		}
Filing Date:	10/31/2003	}
Group Art Unit:	3748	}
Examiner Name:	John Varblik	}
Attorney Docket No.:	341800-82614	}
First Named Inventor:	Delbert J. Thomas, Jr., et al	}
Title:	Rotary Vane Compressor With Interchangeable End Plates	}

- ☒ [x] AUTHORIZATION TO PAY AND PETITION FOR THE ACCEPTANCE OF ANY NECESSARY FEES. If any charges or fees must be paid in connection with the following Communication (including but not limited to the payment of Issue Fees), they may be paid out of our deposit account 12-0913. If this payment also requires a Petition, please construe this authorization to pay as the necessary Petition which is required to accompany this payment.
- ☐ [] Applicant hereby petitions for a -month *extension* and entry of this Amendment which is sent within the month after the due date of , 2003. The payment of \$.00 to cover the -month extension is enclosed herewith.

DECLARATION OF DELBERT L. THOMAS, JR.
PURSUANT TO 37 CFR §1.132

I, Delbert L. Thomas, Jr. do declare and state that:

1. I am one of the inventors of the invention described in the above-identified patent application.

2. I am:

(a) employed by Gast Manufacturing, Inc. as the Business Team Manager - Reciprocating Products; and

(b) a mechanical engineer and graduated from Western Michigan University and was awarded a BS in Mechanical Engineering.

3. I have approximately nine years experience in the air compressor field.

4. I consider myself to be a person of ordinary skill in the art or field of air compressors.

5. I have reviewed the Office Action dated 5/20/2004 which relates to this application and especially page 2, paragraphs 3 and 4 which deal with enablement under 35 USC 112.

6. It is my understanding that the Examiner believes that:

a. The claims contain subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains to make and/or use the invention;

b. It is not clear as to how the end plates seal to the intermediate plate or how there is communication between the intermediate adapter sections and ports; and

c. A cross-sectional view is needed to show the sealing and communication.

7. For reasons expressed hereinafter, I disagree with the Examiner's conclusions. One of ordinary skill in the art could make and/or use the claimed invention based upon his skill and the application's disclosure. The sealing and communication would be understood by him, particularly in view of the present application drawings and his skill in the art. The present drawings are sufficient.

8. Rotary vane compressors which employ an end plate or muffler box with threaded ports are well known in the industry. See for example, Gast catalog pages 12-15, copyright 1998, and Gast Operating and Maintenance Manual, 8 pages, copyright 2001.

9. Referring to page 5 of the Operation and Maintenance Manual, the muffler box (6) is sealed to the end plate (4) by the gasket (5). Use of a gasket to provide sealing between parts of a compressor is known.

10. In addition, the surfaces which engage the body (1) and the end plate (4) are machined smoothly so as to seal against each other without the need for gaskets.

11. A typical rotary vane compressor produces less than 25 psi and the metal parts are sufficiently robust that they do not require additional sealing to provide adequate pressure retention.

12. With regard to communication, it is seen that the muffler box (6) is separated into two sections, an inlet and an outlet part which communicate with the respective inlet and outlet ports.

13. A linear double diaphragm compressor, (which includes tubular inlet and outlet ports) is referred to in the application [0003].

14. I believe that one of ordinary skill in the art considering the above application would seal the intermediate plate (26) to the end plate (24) or to the muffler box/end plate (22) using either a gasket or by very smoothly machining the interfacing surfaces. If necessary, other sealing techniques such as the application of liquid, flowable or other gasket forming sealant materials can be used. In other words, the sealing of the intermediate member to an end plate would be clear to one of ordinary skill in the art.

15. Moreover, I believe that one of ordinary skill in the art considering the above-identified application would understand the nature of communication between the respective end plate ports and the intermediate sections. The manner of communication would be clear to one of ordinary skill in the art.

16. The flow of air through the end plate and/or muffler box *per se* can be linear, angular, circuitous, sinuous, etc. But the important factor is that there is flow through the end plate between the respective ports and respective sections of the intermediate adapter.

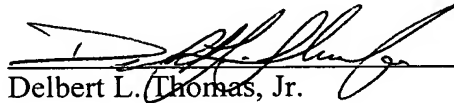
17. Moreover, I believe that one of ordinary skill in the art could make or use the claimed invention with little or no experimentation.

18. I do not believe that a cross-sectional drawing(s) of the end plate surfaces is required to show or understand how the sealing or communication takes place or for one of ordinary skill in the art to understand the sealing and communication.

I declare that all the statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that the statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the above-identified application or any patent issued thereon.

Further declarant sayeth not.

August 12, 2004


Delbert L. Thomas, Jr.